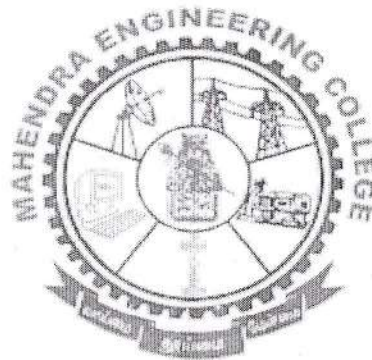# MAHENDRA ENGINEERING COLLEGE

(An Autonomous Institution, affiliated to Anna University Chennai | Accredited by NAAC with 'A++' Grade (Cycle-2) & NBA Tier-I (WA) UG : CSE, ECE, EEE)

Namakkal-63750, Tamilnadu

11th Board of Studies Meeting

Minutes of the Meeting

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

04.04.2024

The following Board of Studies members were present in the meeting:

1. **Dr.N.Viswanathan,** Head of the Department, Electronics and Communication Engineering, Mahendra Engineering College - **BoS Chairperson**

2. **Dr.A.Asokan,** Associate Professor, Department of Electronics and Communication Engineering, Govt. College of Engineering, Thanjavur - **Anna University Nominee**

3. **Dr.T.Senthil Kumar,** Associate Professor, School of Computing, Amrita Vishwa Vidyapeetham, Coimbatore – **Subject Expert**

4. **Dr.V.Balamurugan,** Associate Professor, Department of Electronics and Communication Engineering, Sathyabama Institute of Science and Technology, Chennai. – **Subject Expert**

5. **Mr.Bala Thiagarajan,** Vice President, Capgemini, Bengaluru, Karnataka - **Subject Expert**

6. **Mr.Subramaniam Kathirvel,** Tech Expert, Vehicle Motion, Robert Bosch, Coimbatore – **Industry Expert**

7. **Dr.M.Suganthi,** Professor, Department of Electronics and Communication Engineering, Mahendra College of Engineering, Salem - **Academic Expert**

8. **Dr.M.Muthuvinayagam,** Associate Professor, Department of Electrical and Electronics Engineering, Mahendra Engineering College, Namakkal – **Member (Allied Department)**

9. **All the faculty members of ECE Department**

10. **Dr.S.Sakthivel Murugan,** Associate Professor, Department of Electronics and Communication Engineering, SSN College of Engineering, Chennai – **(Academic Expert & UG Alumnus)**

11. **Mr.S. Sabarish,** Student, Second Year, M.E.-Communication Systems, Mahendra Engineering College, Namakkal - **Member (PG Student)**

12. **Mr. S. Mohammad Raiyon, Student,** B.E. Final Year, Department of Electronics and Communication Engineering, Mahendra Engineering College, Namakkal - **(UG Student)**

13. **Dr.V. Senthil Kumaran,** Assistant Professor, Department of Electronics and Communication Engineering, Mahendra Engineering College, Namakkal – **BOS Coordinator**

The following agenda items were discussed and approved:

1. Dr.N.Viswanathan, Chairperson of BoS, welcomed all the members of Board of Studies for the meeting.

2. Reviewed and confirmed the minutes of the previous Board of Studies meeting held on 21.04.2023.

3. Discussed and approved the Curriculum of the UG program under Regulations -2024 with following suggestions

    i) It is decided to include the courses "Analog Integrated Circuits" as integrated courses in program core with 4 credits

    ii) The Chairperson presented the requirements for introduction of Honors degree and Minor degree in B.E. Electronics and Communication Engineering for the students admitted from the academic year 2024-2025 as per the Anna University guidelines and norms. The members unanimously approved the same for Regulations - 2024 accordingly.

    iii) The Chairperson introduced two one-credit Tamil courses namely 'Heritage of Tamil' and 'Tamils and technology' for the UG Program in accordance with the Anna University's guidelines. Board members approved inclusion of Tamil courses in UG program curriculum under Regulations R-2024.

4. Discussed and approved the Curriculum of the PG program under Regulations -2024

5. In view with the Vision, Mission, PEOs, POs, PSOs, stakeholders' interests and Industry requirements, the syllabi for first to fourth semesters of the UG and entire syllabi for PG Program were discussed and approved under Regulations -2024.

6. The following value-added courses are to be offered to UG Program students under Regulations - 2024 were discussed and approved.

    - Simulation of Electronic Circuits using OrCAD
    - Python Programming for Image Processing

- Embedded system Design using Proteus
- Machine Learning for Signal Processing
- Digital Circuit using CADENCE Tools
- Data Science using Python
- Certified Lab VIEW Associate Developer
- IoT Applications using ARM
- Architecture of Graphics Processing Unit (GPU)
- The Bits and Bytes of Computer Networking

Comments and Suggestion of the members:

- **Dr. A. Ashokan** suggested 1.5 credits to all practical courses, Project work (Phase -I) increased three to four credits and Project work (Phase -II) increased five to six credits and also suggested teach few possible PG courses in laboratory mode for better understanding. He further suggested to complete one mini project per year

- **Mr.Bala Thiagarajan** suggested to introduce more verticals like cloud computing High speed Communication Networks and enabling technologies related to industry 5.0 including Blockchain, analytics of big data, IoT and 6G networks with added resilience and sustainability. Further, he recommended adding hardware-based courses focused to expand students' knowledge, skills and competencies in the semiconductor industries.

- **Dr.T. Senthil Kumar** suggested to remove the following topics:
  - Electronic Circuits Efficiency and applications of Class C tuned amplifier, Stability of tuned amplifiers, Neutralization - Hazeltine neutralization method in Electronic Circuits
  - Genetic Algorithms topics in Soft Computing course
  - Label distribution and binding, label swapping and traffic forwarding, MPLS support of Virtual Private Networks (VPN), MPLS traffic engineering, Multi-protocol Lambda switching (MPIS) in the course Optical Networks.
  - Introduction to CDMA systems, multiuser detection in CDMA systems, optimum multiuser receiver, suboptimum detectors, successive interference

cancellation in the course Advanced Digital Communication Techniques under unit -V

He suggested to teach analog communication course, ADHOC and Sensor Network and Speech Processing and Synthesis using virtual simulators. Further he suggested to include Augmented Reality/Virtual Reality course under UG curriculum and Explainable AI course as professional Elective in ME Communication Systems

- **Dr.V.Balamurugan** suggested to include the topic Finte State Machine in Digital Electronics course under unit -III

- **Dr.M.Suganthi** suggested teach Signals and Systems course as theory course and further she suggested to teach Analog Integrated Circuits as Theory course with Laboratory component under UG curriculum .

- **Mr. Subramaniam Kathirvel** suggested obtaining problems from industries and provide solutions and discuss in few courses from fifth semester onwards. Additionally, he suggested to introduce a course focusing problem solving techniques.

- **Dr. D.Chitra** recommended revising the unit – I contents in the Electronic circuits course with an emphasis on Biasing related topics.

- **Dr.S. Sakthivel Murugan** suggested to include Applications under unit-V in the course Advanced Digital Signal Processing. He recommend to figure out weak areas and emphasized to ensure the topics are available to access via online courses like NPTEL

- **Mr. S. Sabarish** suggested to practice the concepts studied in theory component using simulators and thus helps the students in writing technical articles in software-based domains. Further, he suggested to focus more on recent trends in communication systems.

- **Mr.S.Mohammad Raiyon** suggested including courses like hardware troubleshooting and networks to learn the fundamentals of computing, network security and different computer operating systems.

7. The panel of external faculty members to be appointed as examiners for various examination activities was discussed and approved.

The above discussed matters were recommended to the Academic Council for approval.

9. Changes/Revision in Curriculum and Syllabus

The changes/revision in the curriculum and syllabi are provided in Annexure -I.

10. Introduction of new courses

The list of new courses introduced in the Curriculum of UG Program is provided in Annexure -II.

Dr. V. Senthil Kumaran, Coordinator, Board of Studies, concluded the meeting with a Vote of Thanks, thanking all of the members for their suggestions, recommendations and comments in ensuring the smooth conduction of BOS meeting.

BoS Coordinator

Chairperson

Principal